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(54) **Washing machines and clothes
dryers**

(57) In a washing machine or clothes
dryer of the kind having a rotatable
drum mounted within an outer cabinet
having a front formed as a separate

panel, the side edges of the panel (1)
and/or the adjoining edges of the sides
(2) of the cabinet, which may also be
formed as separate panels, are
obscured by vertical trims (13). The
panel or panels may be formed of pre-
painted steel and the trims either of
metal or synthetic plastics material.

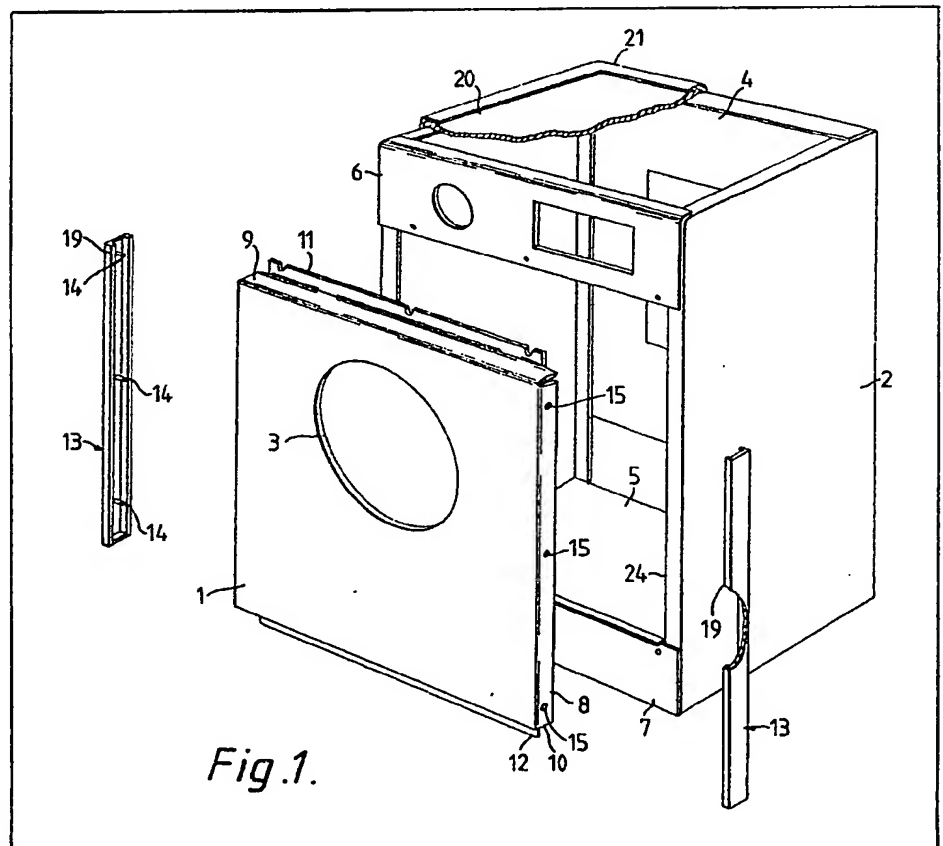


Fig. 1.

The drawings originally filed were informal and the print here reproduced is taken from a later filed formal copy.

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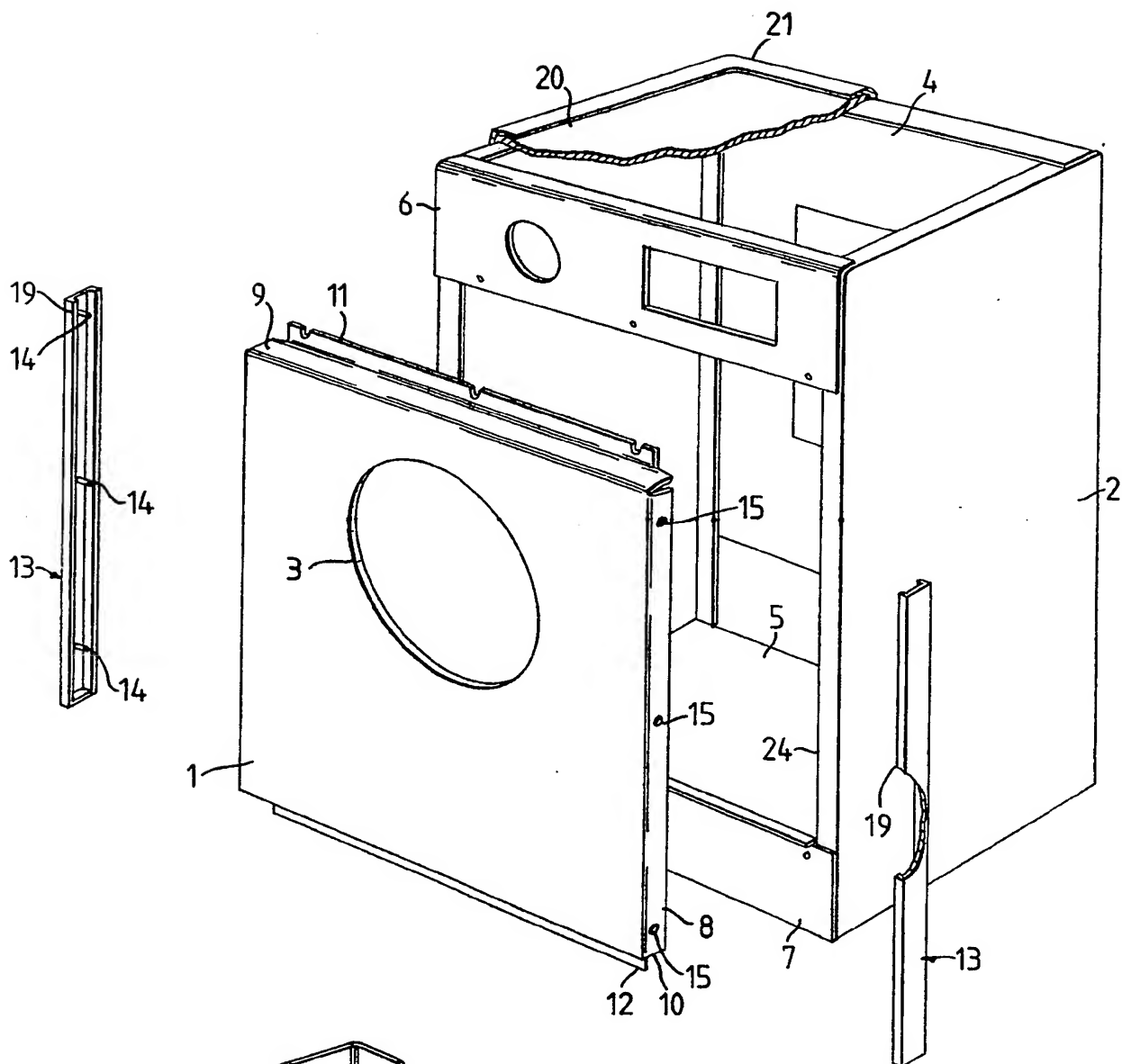


Fig. 1.

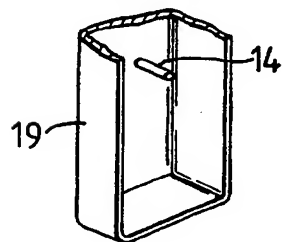
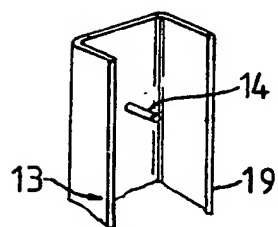
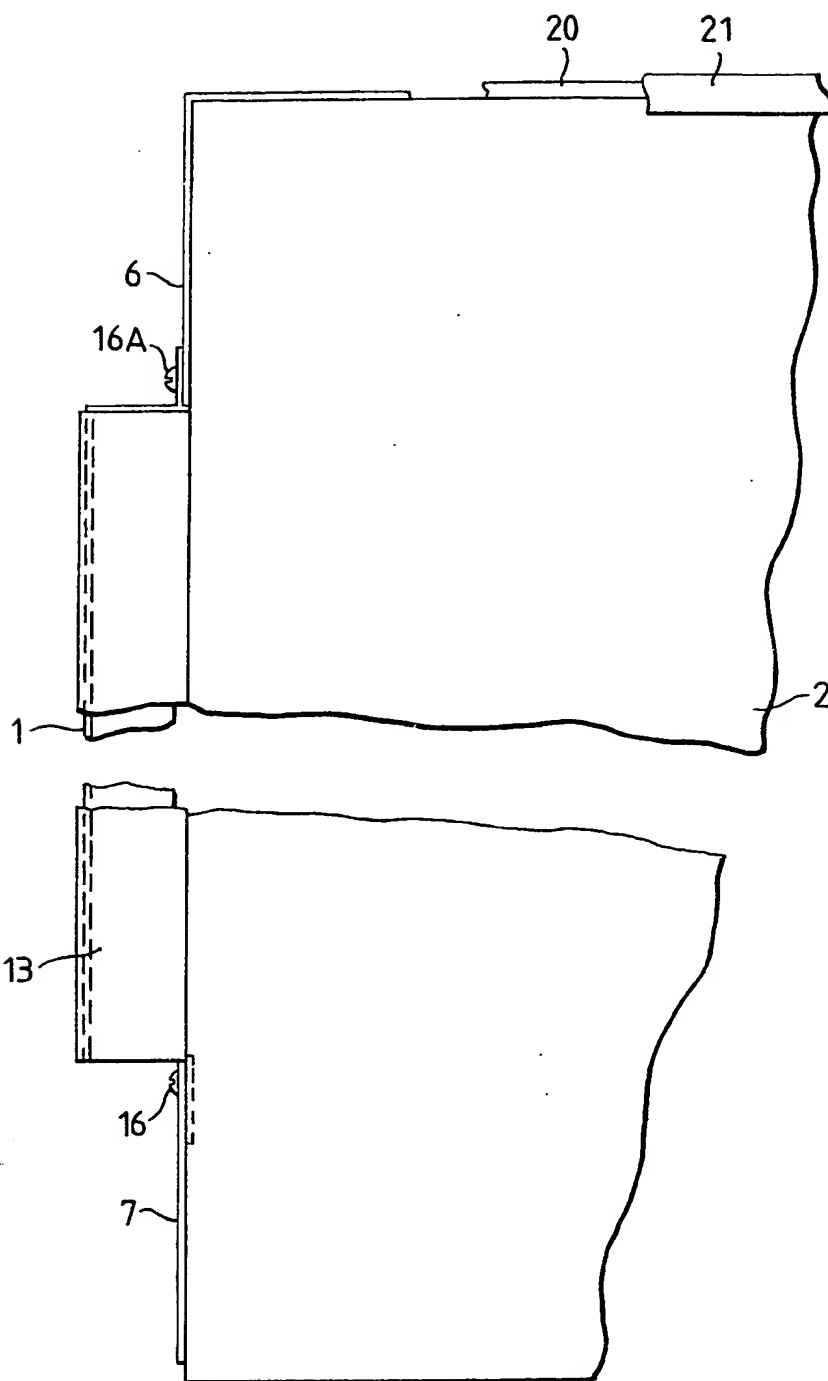
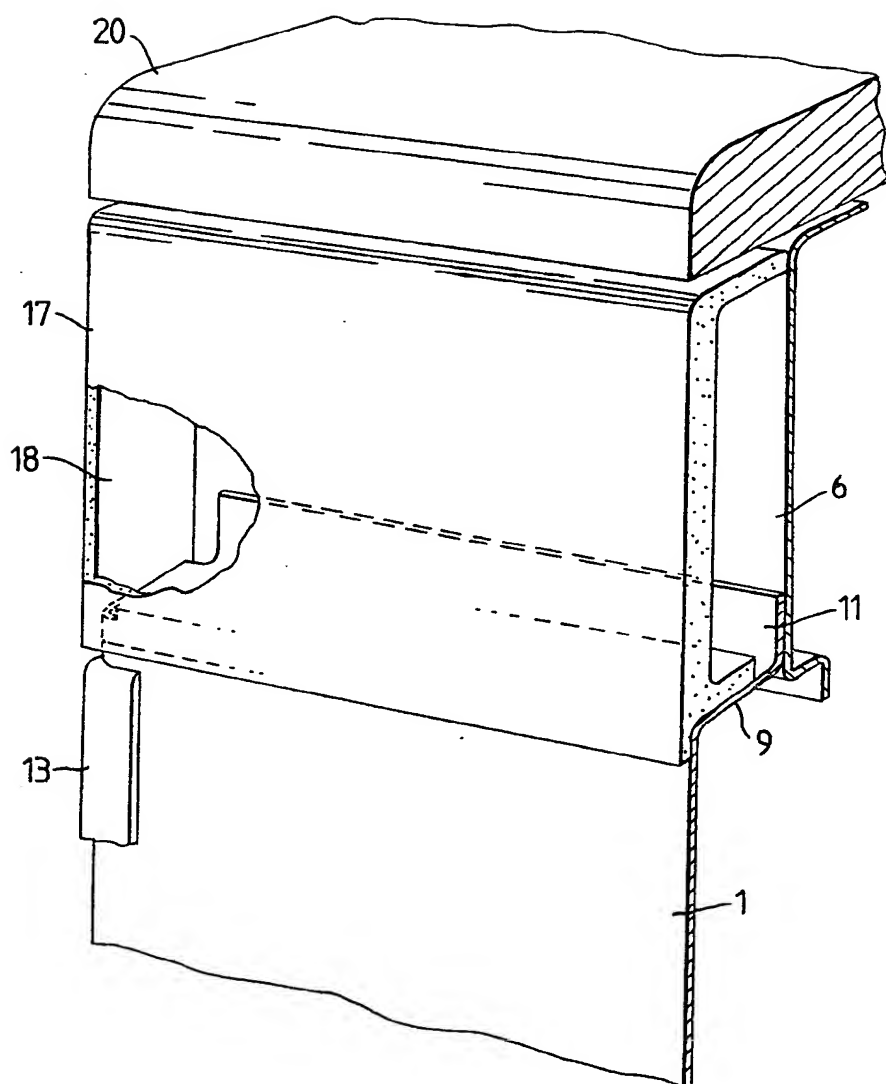


Fig. 4.

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*Fig.2.*

*Fig.3.*

SPECIFICATION

Washing machines and clothes dryers

The invention relates to washing machines and clothes dryers of the type in which a rotatable drum for receiving clothes is mounted for rotation about a horizontal axis in an enclosing cabinet, the front of which is provided with a loading opening for introducing clothes into, and removing them from the drum.

Whereas it has become customary to construct such a cabinet by adopting a 'so-called' 'front wrapper' or a 'top-wrapper' design, that is one in which a sheet of metal is bent to form three adjacent sides of the cabinet, i.e. front and two sides (front wrapper) or top and two sides (top wrapper), the remaining sides are formed either by additional panels or by some other part associated with the rest of the washing or drying machine construction. Such cabinets need to have their wrappers painted during manufacture since the coating operation needs to be carried out after the wrappers have been formed so ensuring that no subsequent damage to the painted finish occurs.

However, with the increasing use of pre-coated (e.g. painted) steel sheets the basic concept of cabinet design has had to be changed since it is not possible to lightly form or shape pre-coated steel without damaging or weakening the coated finish, especially on the edges and corners of cabinets which are more vulnerable anyway to damage.

It is a primary object of the present invention, therefore, to provide a construction of washing or drying machine cabinet which while making use of pre-coated panels avoids the disadvantages referred to.

Another object of the invention is to provide an improved appearance of washing or drying machine.

According to the invention in a washing machine or clothes dryer of the type specified having a cabinet with a separate front panel the side edges of the panel and/or the adjoining edges of the sides of the cabinet are obscured by vertical trims.

Where the sides of the cabinet are also formed as separate panels these may be supported in spaced relationship at the front of the cabinet by transverse connecting members adjacent the top and bottom of the cabinet, the upper and lower edges of the front panel being secured to the respective connecting members, and the trims being secured to the sides of the front panel so as to obscure its side edges.

The trims may also obscure the adjacent edges of the side panels. Preferably, however, the front edges of the side panels are formed with inwardly turned flanges and the trims in such a case are conveniently also formed with inwardly turned flanges which abut the side panel flanges in the assembled cabinet.

Conveniently the trims are of channel shape and are secured to the sides of the front panel with the side edges of the latter accommodated

within the respective channels. Preferably the side edges of the front panel are formed with rearwardly turned flanges, the width of the trim channels being of a width sufficient to accommodate the flanges.

The trims in such a case may be provided with pegs projecting from the base of the channel and which in the assembled cabinet extend through appropriately positioned holes in the front panel flanges; the trims may then be secured to the panel by push-on fixing devices fitted on to the ends of the pegs. However other means of fixing the trims to the panel, for example a suitable adhesive, may alternatively be employed.

The trims are conveniently formed of a synthetic plastics material, but may in some cases be formed of a metal.

The invention will be further explained by describing, by way of example, with reference to Figures 1 to 4 of the accompanying schematic drawings, one form of washing machine having a cabinet embodying the invention.

In the drawings Figure 1 represents a partly exploded view of the cabinet,

Figure 2 shows an enlarged side view of part of the cabinet,

Figure 3 shows a sectional view of a front upper corner of the cabinet, with a fascia fitted, and

Figure 4 represents an enlarged view of one of the trims employed in the washing machine.

Referring to the drawings the front, top, side and rear of the cabinet are made from separate panels subsequently secured together, the front panel 1 and the side panels 2 being formed of pre-coated steel sheet.

The cabinet is designed to house a clothes containing drum (not shown), mounted so as to rotate about a horizontal axis, at low speed in alternate directions to achieve washing of the clothes in the drum and in one direction only at high speed for centrifugal drying of the clothes, the front panel 1 being formed with a loading opening 3 for providing access to the drum and arranged to be fitted, in the completed machine, with a circular door (not shown).

The rear and bottom panels 4, 5 are made from zinc coated steel and are fitted and joined together and to the side panels 2 using rivets or other convenient forms of fastening devices, or by the provision on at least one of the panels with integral protruberances which extend into openings or recesses in one or more other panels, and are shaped by deformation to secured the panels together.

The front edges of the side panels 2 are formed with inwardly-turned flanges 2A and are held in spaced relationship at the front of the cabinet by upper and lower transverse connecting members 6, 7 respectively.

The front panel 1 is provided at each side with a rearwardly turned flange 8, and at the top and bottom with rearwardly turned flanges 9, 10 which terminate in upwardly and downwardly turned extensions 11, 12 respectively. These extensions are arranged to be secured to the

upper and lower connecting members 6, 7 by screws or other suitable fixing means.

In order to obscure the side edges of the front panel 1, the panel is fitted with side trims 13 of channel shaped cross section, the width of the channels being such as to accommodate the flanges 8. The base of each channel is formed with upstanding pegs 14 which are arranged to fit into appropriately spaced holes 15 in the flanges.

Push-on fixing devices (not shown) of any convenient form are arranged to be fitted on to the ends of the pegs 14 where they project through the holes in the flanges 8 to secure the trims to the panel 1. Although each trim 13 has been shown with three pegs 14 in Figure 1 it will be appreciated that any convenient number of suitably positioned pegs may be employed.

After the trims 13 have been fitted to the front panel 1 the lower flange extension 12 of the latter is fitted behind the top of the lower transverse connecting member 7, and secured to it by screws as at 16 (Fig. 2), the upper flange extension 11 of the front panel being similarly secured to the upper transverse connecting member 6 by screws as at 16A. The rear walls 18 of the channel shaped trims 13 then abut the inwardly turned flanges 2A of the side panels and form a neat and close fit.

In this way the side edges of the front panel 1 are obscured, and in addition the use of any obvious fixing means for the panel is avoided and no damage or removal of material from the pre-coated panel occurs.

A moulded plastics fascia 17 which provides the control panel for the washing machine extends across the front of the upper transverse connecting member 6 as shown in Figure 3, the fascia extending downward to obscure the top edge of the front panel 1, and having sides 18 which obscure the corners and tops of the side flanges 8 of the panel.

The trims 13 are shown terminating just below the bottom edge of the fascia 17 although in some cases they could extend full height of the side flanges 8 of the front panel so that their top edges are also obscured by the fascia.

Apart from providing an especially neat appearance for the front of the washing machine, mounting of the trims on the side edges is advantageous compared with the use of similar trims fitted along the upper and lower edges of the panel where, due to the especially moist environment associated with washing (and drying) machines, moisture would quickly collect and be retained, eventually causing considerable damage by rusting to the edges of the paint work. No such damage is likely with side mounted trims and in any event the trims provide a sufficient margin of cover so that any rusting of the edges of the panel which may occur will be concealed.

Although in the drawings the front and rear walls 19 of the trims 13 are shown to be of the

same depth it will be appreciated that this need not be the case and they may be of different depths as may be convenient.

The top 20 of the cabinet can be in the form of a panel of pre-painted steel or other material, secured to the adjoining members of the cabinet in any suitable manner, with the edges of the panel obscured by a peripheral trim as at 21 in Figures 1 and 2, or it may be in the form of a plastics moulding as shown in part in Figure 3.

CLAIMS

1. A washing machine or clothes dryer of the type specified having a cabinet with a separate front panel, and in which the side edges of the panel and/or the adjoining edges of the sides of the cabinet are obscured by vertical trims.

2. A washing machine or clothes dryer according to Claim 1 in which the sides of the cabinet are also formed as separate panels, wherein these side panels are supported in spaced relationship at the front of the cabinet by transverse connecting members adjacent the top and bottom of the cabinet, the upper and lower edges of the front panel are secured to the respective connecting members, and the trims are secured to the sides of the front panel so as to obscure its side edges.

3. A washing machine or clothes dryer according to Claim 1 wherein the front edges of the side panels are formed with inwardly turned flanges and the trims are also formed with inwardly turned flanges which abut the side panel flanges in the assembled cabinet.

4. A washing machine or clothes dryer according to any preceding claim wherein the trims are of channel shape and are secured to the sides of the front panel with the side edges of the latter accommodated within the respective channels.

5. A washing machine or clothes drying according to any preceding claim wherein the side edges of the front panel are formed with rearwardly turned flanges, the width of the trim channels being of a width sufficient to accommodate the flanges.

6. A washing machine or clothes dryer according to Claim 5 wherein the trims are provided with pegs projecting from the base of the channel and which in the assembled cabinet extend through appropriately positioned holes in the front panel flanges.

7. A washing machine or clothes dryer according to Claim 6 wherein the trims are secured to the front panel by push-on fixing devices fitted on to the ends of the pegs.

8. A washing machine or clothes dryer according to any preceding claim wherein the trims are formed of synthetic plastics material.

9. A washing machine or clothes dryer according to any preceding claim wherein a fascia extends across the front of the cabinet and has a

lower edge which extends downwards over, so as to obscure, the top edge of the front panel.

10. A washing machine or clothes dryer of the

5 type specified substantially as shown in and as hereinbefore described with reference to Figures 1 to 4 of the accompanying drawings.

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